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**A Modern Harmonic Error Analysis Measurement System for Dipole and Quadrupole Magnets at Lawrence Berkeley Laboratory*** P.J. BARALE, M.I. GREEN, W. GREIMAN, D. HALL, D.H. LERNER, J. MACFARLAND, R.I. SCHERMER, and D.A. VAN DYKE, Lawrence Berkeley Laboratory, Berkeley, CA, 94720

In 1987 (1), we reported on the computerized harmonic-error analysis system at LBL. This paper describes the hardware and software of our new UNIX/VME based system. Error harmonics can be detected using rotating coil arrays feeding either digital integrators or DVM's. The coil arrays can be configured for either digital or analog bucking. The results of each measurement are displayed numerically and graphically in real time. Data acquisition, processing and display can take as little as 7 seconds. Accuracy, precision and resolution will be discussed, and measurement techniques will be described.

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[1] Magnetic Measurement System for Harmonic Analysis of LBL SSC Model Dipoles and Quadrupoles, M.I. Green et al, MT10, Sept. 1987

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